

**Minutes**  
**AdriaMed Study Group on Jabuka/Pomo Pit and on spatial fisheries analysis**  
**Split, Croatia, 12 September 2018**

Opening of the meeting

Enrico Arneri (AdriaMed project coordinator) presented the rationale behind the decision to create this Study Group to plan the future on the monitoring of Jabuka/Pomo Pit on the basis of the monitoring plan discussed in the Sub Regional Committee of the SAC and approved during the annual SAC meeting in June. He explained that the aim of the meeting is the overview of the state of art and to start the discussion on what will be done in the future for data collection taking into account the socioeconomic aspects too.

Adriatic UW (underwater)TV surveys and monitoring presentation

The results of the UWTV surveys showed that the population of *nephrops norvegicus* is very different from the rest of the Adriatic population in terms of sizes which is minor in the rest of Adriatic. Since 2015 there are different kind of closures and with the GFCM Rec. GFCM/41/2017/3 it has been established the FRA in Jabuka/Pomo Pit. Referring to the species *parapeneus* and *merluccius merluccius* they are increasing in the Italian waters

Last year unfortunately the survey could not take place because the vessel was not available for technical problems. The second monitoring activity, so an additional survey, will be carried out in autumn 3-15 November 2018 (MIPAAFT-CNR) only for the Italian side. The panelist finished her presentation informing that it is planned another survey only next year (May 2019), so maybe it should be the case to continue this kind of monitoring?

There is a work in progress related to the ecosystem approach with examples of correlation between environmental parameters collected by means of the new UWTV system and the data classically collected in this kind of survey (eg density, abundance, biological parameters...) and it seems that it could be a very useful tool the UWTV system.

The Croatian fisherman representative (Romeo Mikicic) informed that the sizes of *merluccius merluccius* is increasing in Croatian waters of 30% more or less each year.

Spatial distribution of fishing activities in Jabuka Pit

Enrico Arneri declared that the tool used in Mantis project for spatial distribution could be useful for Jabuka/Pomo Pit.

This is a tool taught to simulate the effect of the FRA on the capacity of catching the different classes of age, for the moment all the exercise is on the Italian fleet. The idea is to use this tool for Jabuka Pit including the entire fleet.

The Director of the Croatian Institute of Oceanography and Fisheries (Nedo Vrgoč) said that during the Medits survey they increase 5 new additional working days for surveys and they increase the number of 8 surveys in territorial waters.

Results of the last SAC meeting (June 2018) for the Jabuka/Pomo Pit

Enrico Arneri presented the results related to the monitoring:

- GFCM41/2017/3 par. 20 “The SAC and the Compliance Committee (CoC) shall review its implementation on a yearly basis in order to issue recommendations where appropriate. Based on SAC advice, the management measures for the Jabuka/Pomo Pit shall be reviewed in 2020.”:



Given the scientific complexity of the issue, an efficient work plan would be mandatory to monitor this recommendation and that a meeting of the FAO AdriMed regional project had already started this process (SRC-AS)

**Overall objective** (SRC-AS) of the monitoring plan: effectiveness assessment of the FRA towards



- (i) contributing to the rebuilding of the stocks of the Adriatic Sea through the protection of EFH,
- (ii) protecting VMEs in the area and
- (iii) enhancing the densities of organisms in term of biomass and abundance within FRA.

Final aim: provide the SAC **by 2020** of a detailed analysis of the **biological and economical effects** of the establishment of the Jabuka/Pomo Pit FRA.

### **Proposed monitoring plan**

#### Monitoring activities currently in place

1. **EU DCF and GFCM DCRF**: Biological sampling of catches and discards of *Nephrops* and *Merluccius*, Landings, catches and discards for major species by gear in the area
3. **MEDITS** bottom trawl surveys
4. **Under Water TV** surveys of whole Jabuka/Pomo area every spring linked with experimental bottom trawling with specific experimental a *Nephrops* net (CNR-ISMAR and IOF - AdriMed and funded by MIPAAF)
5. **Bottom trawling on Western** Jabuka/Pomo area every autumn with a *Nephrops* net (funded by MIPAAF)
6. **VMS, AIS** raw data and **Log-book** data for all fishing fleet segments exploiting demersal resources
7. Economic data for all fishing fleet segments exploiting demersal resources (EU DCF and the GFCM DCRF)

#### Existing historical datasets to be made available to the Jabuka/Pomo AdriMed Study group

1. **DCF/DCRF** data on annual commercial catches by species, Length Frequency Distributions from biological sampling of commercial catches from 2006 for Italy and from 2013 Croatia (DEMON data for previous years)
2. **GRUND** scientific bottom trawl surveys covering the whole GSA 17: data on index of biomass and abundance of all species and population structure (LFD) for commercial species from 1982 to 2007 for Italian + International waters and since 1985 to 2007 (not every years) for Croatians territorial waters.
3. **GRUND** scientific bottom trawl surveys data on **macrozoobenthos**.
4. **MEDITS** scientific bottom trawl surveys covering the whole GSA 17: data on index of biomass and abundance of all species and population structure (LFD) for commercial species from 1994 for Italian + International waters and since 1996 for Croatian territorial waters.
5. **Economic data on bottom trawl and bottom long line** fisheries since 2006 for ITA and 2013 from Croatia.

#### Current scientific outputs

1. **Annual analytical stock assessments** of *Merluccius merluccius*, *Parapenaeus longirostris* (GFCM WGSAD)
2. **Annual biomass estimates**, density indices and stock structure of *Nephrops norvegicus* obtained through UWTV and bottom trawl surveys; computation of a trend of harvest ratios
3. **Annual indices of biomass** of *Merluccius*, *Parapenaeus*, *Nephrops*, and *Lophius budegassa* (MEDITS)
4. Experimental application of **multispecies ecological models** on the area.

#### Proposed Additional Monitoring

1. **10-15 additional trawl hauls** to be conducted during summer MEDITS survey in Pomo/Jabuka area (to refine the biomass indexes of commercial species and an additional bottom trawl monitoring in winter to improve the monitoring of juveniles of *Merluccius merluccius* which specifically concentrate in the area).

On point 1. Nedo Vrgoc and Corrado Piccinetti proposed an additional bottom trawl for juveniles this year in November or at the beginning of January.

3. **Analysis of logbook data as well as VMS/AIS** data for the authorized fleets, to monitor CPUE of trawlers and bottom long-liners.

On point 3 (analysis of logbook data) the representative of the Croatian administration declared that it will be possible to do a separate analysis of the activities of logbook, and that national scientists could have access to the data coming from logbook. Corrado Piccinetti arose a few problems with logbook that are related to the fact that the fishing vessels do spend all time in the same area, sometimes the species reported are not the correct ones, and it could be possible to take a deeper analysis day by day. The representative of the Italian administration said that the authorized vessels are less than 400 regarding trawlers and longlines and that they can catch only 2 days for week. Referring to the data coming from logbook, we need to improve the compilation, the big problem is that the fishermen do not catch only inside of the area, so the problem is to quantify how much fish has been caught in Jabuka Pit only. He closed its intervention said that it should be advisable that each administration will collect data coming from logbook and then to find a way to aggregate data.

Proposed scientific analysis:

1. Standardization of scientific survey data (MEDITS and GRUND) prior to their use;

The trawl survey has been collected in different ways, this is the problem we are talking about Medits and Grund. Enrico Arneri is proposing to establish a data set and to organize a GFCM meeting to talk about the standardization of data.

2. **Benchmark stock assessment** for *Merluccius merluccius* in 2018 and *Parapenaeus* in 2019;

3. **Development of an assessment for *Nephrops norvegicus*** taking into account different ecological characteristics of populations in the Adriatic.

4. Testing and **application of spatial based assessment tools** developed recently or under development (e.g. EU funded project **MANTIS**)

5. **Historical analysis of macrobenthic data** available (GRUND and MEDITS) to provide an estimate of the past and present situation of macrobenthic communities and monitor their **reaction to the trawling ban**.

Enrico Arneri asked if it is possible to start collect data of GRUND and it could be the case to have the first results in March.

6. Data limited **stock assessments** of *Lophius budegassa* and other commercially important species to increase the understanding of the multispecific fisheries and detect potential additional side effects of FRA.

7. **Socioeconomic analysis** of authorized fleets based in the authorized landing ports.

Rosa Caggiano, at the end of the meeting, informed the participants about the decision approved by the ExCom of the creation of a MEDAC ad hoc WG on co-management of the Jabuka/Pomo Pit. Somebody didn't share the creation of this ad hoc WG because there is the risk of the duplication of work.